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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/814,277	03/21/2001	Toshihiko Hanamachi	6946-10	3964

20575 7590 05/29/2003

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EXAMINER

ZERVIGON, RUDY

ART UNIT	PAPER NUMBER
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1763

8

DATE MAILED: 05/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	09/814,277	HANAMACHI ET AL.	
	Examiner	Art Unit	
	Rudy Zervigon	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 5, 2003 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5, 7, 10, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMillin et al (USPat. 5,835,334). McMillin teaches a heater device (Figure 1) including a ceramic ("anodized aluminum", column 4, lines 10-15) heater (2, column 5, lines 35-50) defining a heating surface. McMillin further teaches a detachable (column 4, lines 52-55) ceramic plate made of aluminum nitride or alumina (1,1c, column 4, lines 20-25, 33-39; alumina – "Al₂O₃") having a substantially horizontal planar lower surface (1/2 interface) conforming to and supported by the heating surface (1/2 interface; Figure 1), and in turn supports an object (4) to be heated. McMillin further teaches a radio frequency electrode (10, Figure 1) buried in the ceramic heater. McMillin further teaches that the ceramic plate includes an upper supporting surface (1/1c surface) for supporting an object to be heated.

Art Unit: 1763

McMillin teaches a fastened (8) ceramic plate, and, as a result, McMillin does not teach the ceramic plate that is not fastened to the heater.

It would have been obvious to one of ordinary skill in the art at the time the invention was made not to fasten McMillin's ceramic plate to McMillin's ceramic heater.

Motivation not to fasten McMillin's ceramic plate to McMillin's ceramic heater is to provide rapid servicing of McMillin's ceramic heater.

4. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMillin et al (USPat. 5,835,334). McMillin is discussed above. McMillin further teaches an electrode (1) for RF power (24) buried in the ceramic plate (1,1c; Figure 1). McMillin does teach the thickness of the ceramic dielectric layer 1c as being within 5-50 μ m (column 4, line 38). McMillin does not teach that the ceramic plate has a thickness of less than 2mm or less than 5mm.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the thickness of the ceramic plate.

Motivation to optimize the thickness of the ceramic plate is to optimize the electrostatic clamping force (column 1, lines 35-38). Further, it is well established that changes in apparatus dimensions are within the level of ordinary skill in the art. (Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); See MPEP 2144.04)

5. Claims 8, 9, and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMillin et al (USPat. 5,835,334) in view of Beinglass et al (USPat. 5,645,646). McMillin is

Art Unit: 1763

discussed above. McMillin does not discuss an annular low wall surrounding the supporting surface, nor does McMillin teach a process vessel housing the heater and ceramic plate.

Beinglass teaches a similar chuck (20; Figures 1-3,6) including an annular low wall surrounding the supporting surface (Figure 2,3,6) and a process vessel (12) housing the chuck.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to increase the height of McMillin's annular low wall to surround the supporting surface and include this structure in a process vessel housing as taught by Beinglass.

Motivation to increase the height of McMillin's annular low wall to surround the supporting surface and include this structure in a process vessel housing as taught by Beinglass is to provide for uniform heating (column 1, lines 41-51). Motivation to include the support of McMillin in the chamber of Beinglass is to use the chuck as designed by McMillin in a processing apparatus.

Response to Arguments

1. Applicant's arguments filed March 27, 2003 have been fully considered but they are not persuasive.
2. Applicant's arguments addressing the amendments filed March 27, 2003 is addressed in the new rejections as necessitated thereby.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (703) 305-1351. The examiner can normally be reached on a Monday through Thursday schedule from 8am through 7pm. The official after final fax phone number for the 1763 art unit is (703) 872-9311. The official before final fax phone number for the 1763 art unit is (703) 872-9310. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (703) 308-0661. If the examiner can not be reached please contact the examiner's supervisor, Gregory L. Mills, at (703) 308-1633.



**JEFFRIE R. LUND
PRIMARY EXAMINER**